



# IMPACT OF INVESTMENT IN THE HEALTH ON THE ECONOMIC DEVELOPMENT OF THE STATE OF RAJASTHAN

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## ABSTRACT

As we know "health is wealth" because health has a dimensional effect on the economy of a state. Health is an essential element of economic development, it affects the saving and income. Food expenditure and cost of treatment are health expenditure. Through this research paper we are trying to state the relation among the food expenditure, cost of treatment, saving and income. For that we collected 700 individual data from the 7 divisions of Rajasthan. These are Ajmer, Bharatpur, Bikaner, Jaipur, Jodhpur, Kota and Udaipur. This research paper main objective is to find out the effect of health expenditure on economic development of the state of Rajasthan.

**KEYWORDS:** Health, Food Expenditure, Cost of Treatment, Economic Development, Rajasthan, Divisions.

## INTRODUCTION:

Health is a primary concern to an individual. "Health is wealth" it is not a proverb. We know in economics there is a very qualitative concept on production, that is production function. Production function shows the relation between input and output. The production function equations are as follows:-

$$Q = f(L, M, K, T, E)$$

Here Q = production or Output.

L = Labour, men

M = machine

K = capital

T = technique

In the above production function equation, the main element of the production function is "L". Here "L" denotes the labour or men. Labour is a very essential factor of production for an output. It is not very simple to clarify the factor of production labour. This term also indicates technical know-how. Labour term is divided in two part, first part is physical labour and second is mental labour. So every production is directly and indirectly related to labour. It is very clear that Good working conditions will affect the production level of a country. The labour component plays a vital role in production, GDP. Labour consists of various components such as health, motivation, honesty, living standard, CDR, Morbidity rate, birth rate etc. Health component is directly related to labour. If a labour has health related issues definitely its impact will be shown on the production, income and saving also. Healthy labour (men) will work efficiently, healthy labour will work hard and the marginal productivity of labour will improve in this working condition. Health has a positive relationship with production. Good health conditions will rise in level of production and bad health issues have an inverse relation with production. There are some Health components which affect health such sanitation, health care, food expenses, savings, education, availability of PHC, CHC, food, environment, water etc. On the other hand, development is not a processor of increasing GDP and per capita income, but also a process of improving human life, health etc. As we know per capita income will increasingly generate GDP, income and saving. So the government must take initiative in the right manner. For it, big push theory must be applied in the health sector. An individual out of pocket on health and healthcare activities affects the income and saving of an individual. Health care expenses will affect the individual's income and savings and others.

If an individual suffers from health issues its effect will be on the marginal productivity. Due to health problems an individual's marginal product eventually declines. As the diminishing marginal production Income and savings are reduced respectively and it will affect the economic development. Because health expenditure, food expenses and savings for health purpose has positive relationship with per capita income. Individuals productivity will increase in healthy food condition vice versa. Same health care activities and expenses on health has very positive relation with income level. Now it is very clear that all these element has positive relation with economic development.

Public expenditure is a subject concern with public finance. In public finance

individuals and government are the main element for development. Health is not only an individual concern issue but also it is a national issue therefore the government must take initiative in a positive way because health is essential for GDP, saving and income. So in this scenario per capita cost treatment definitely affects the saving and income of an individual.

It is a symmetric aspect that goes hand in hand that the need for government financing of health is that which categories of Healthcare the government should Finance. Public economics also layout the categories of health Care that need to be supported by the government. Rajasthan state plays a vital role in Indian economy.

Healthcare expenditure in Rajasthan:- Rajasthan is divided in 7 divisions Ajmer Bikaner, Jaipur, Jodhpur, Kota, Bharatpur at Udaipur. these 7 division's have their own division level Hospital with the other Private hospital also. Rajasthan has mostly rural area according an estimation 9494 903 households in Rajasthan belong to rural areas, in these adverse conditions people having low out of pocket on Health Care. Rajasthan has 47% (about 2 crore) population engaged in full and partial works. Approximately 52% male and 43% female population are working with 61% of literacy rate.

Rajasthan has 8th rank in India with 11.33 lakh crore GDP, Rs. 1.80 lakh crore revenue and Rs. 2.26 lakh crore expenditure. Rajasthan government spends only rs 904 per capita. The only states with lower health spend per capita then Rajasthan, Jharkhand, Madhya Pradesh and Bihar. Rajasthan state's total health expenditure's 74% part is borne by the people's out of pocket. Indian health care market is rapidly growing. India's Healthcare market is divided into two parts, the first part is government and second is the private sector. Which affects their productivity, saving and income. Gross national product of India is growing over the year and per capita health expenditure shows rise over the year but India's Public Health expenditure as a percentage of just over 1.4% of the GDP and developing countries are spending on healthcare sector more than India like the USA, Japan and Switzerland, others. If we talk about the per capita health expenditure of India Rs. 111,2 per capita which is very low in comparison to the other country.

Rajasthan most people come from middle families nevertheless Rajasthan population pays 74% of total health expenditure of total health expenditure of the state. The free drug scheme and free screening scheme run by the Rajasthan government is doing well, but its problem is that it is far away from the reach of the people. This is the reason that there is a huge shortage of PHC and CHC in Rajasthan, especially in village areas.

Due to lack of health care facilities, the citizens of Rajasthan invest some part of their limited income in the health sector, thus their savings and income have an impact on the expenditure incurred on this health. Through this research paper, we wanted to know what is the effect of health expenditure, food expenditure and saving for health upon the income of an individual. Because here income represent the economic development. For the research purpose we collect primary data from 700 respondent's of 7 division's of Rajasthan.

## OBJECTIVES:

The Primary Objective of the research is to analyze and measure the quantum of investment in the health sector made by individuals to maintain and increase the aggregate productivity or income.

The Secondary Objectives of the study are as follows:

1. To study the relationship between income and health expenditure (cost of treatment)
2. To portray the in-depth view of investment on health and its impact on income.
3. To establish relationships among cost of treatment, food expenditure, saving and income.

#### HYPOTHESES:

Following hypotheses have been formulated in accordance with objectives of the study:

#### Null Hypothesis:

**Ho:** Investment in health is not related to economic development.

#### Alternate Hypotheses:

**Ho<sub>1</sub>:** Investment in health and food expenditure has no significant relationship with productivity.

**Ha<sub>1</sub>:** Investment in health and food expenditure has a significant relationship with productivity.

**Ho<sub>2</sub>:** Investment in Health is not related to income of individuals.

**Ha<sub>2</sub>:** Investment in Health is related to income of individuals.

**Ho<sub>3</sub>:** Health awareness doesn't affect the quantum of savings.

**Ha<sub>3</sub>:** Health awareness does affect the quantum of savings.

#### Research Instruments:

1. Questionnaire for Individuals
2. interview.

#### Analysis Tools:

The proposed research study envisages with the following analysis tools:

1. Factor Analysis
2. ANOVA
3. Correlation
4. Multiple Regression

#### RESEARCH METHODOLOGY:

For the finding of the objectives and hypothesis testing, we used statistical qualitative techniques. we assume that per capita income represent the economic development. There are so many indicator of the economic development such as health, education, income, living standard etc. in this research paper we assume income as a economic development. According to our hypothesis cost of treatment, food expenditure and savings has no significant relationship with income. To find out the objective of the research, we have collected 700 individual data information from 7 divisions of the state of Rajasthan. For the research purpose we collect primary data through the questionnaire prepared by the researcher. This questionnaire were filled by the 700 individual from

Rajasthan on the randomly basis. This study based on primary data, after compilation the data use anova correlation and multiple regression for the objective studies.

To find out the objective, we use qualitative method and filled questionnaire, the interview taken by the researcher from the seven division of Rajasthan, which are as follows:

Ajmer	Ajmer, Bhilwara, Nagaur, tonk
Bharatpur	Bharatpur, Dhaulpur, Karauli, Sawai Madhopur
Bikaner	Bikaner, Churu, Sri Ganganagar, Hanumangarh
Jaipur	Jaipur, Dausa, Alwar, Sikar, Jhunjhunu
Jodhpur	Barmar, Jaisalmer, Sirohi, Jalore, Jodhpur, Pali
Kota	Kota, Baran, Bundi, Jhalawar
Udaipur	Udaipur, Banswara, Chittorgarh, Dungarpur, Rajsamand, Pratapgarh

We collect 100 individual 200 individual data various divisions by randomly in the question in the questionnaire were asked in the questionnaire to the respondent Healthcare, savings, income, sanitation, food expenses, Health Care activities etc. In the SPSS sheet. To Find out the result according to the hypothesis and objectives, following statistics techniques were used by the researcher:

- (1) correlation
- (2) regression
- (3) anova
- (4) multiple regression

#### RESULT AND SUGGESTION:

A multiple regression was carried out to investigate whether cost of treatment, food expenses and savings for health could significantly predict participants' income. The results of The regression indicated that the model explained 98.8% ( $R^2=.988$ ) of the variance and that the model was a significant predictor of income,  $F(3,696) = 19103.695$ ,  $p=.000$ . While cost of treatment, food expenses and savings for health contributed significantly to the model ( $B=.1.023$ ,  $p<.05$ ,  $B=1.055$ ,  $p<.05$ ,  $B=.978$ ,  $p<.05$ ). we have also find out the durban watson test (2.063), shows there is a negative autocorrelation among the dependent and independent variable. The final predictive model was:

$\text{income} = 4918.008 + (.978 * \text{savings}) + (1.023 * \text{cost of treatment}) + (1.055 * \text{food exp.})$

Good health plays a vital role in sustainable economic development, good health has a positive effect on production and Bad health has a negative relation on economic development. Expenses on Healthy food and cost of treatment improves the per capita income. There is a significant relation between food expenditure and productivity. There is a strong correlation ( $r=.964$ ) between health expenditure and economic development according to analysis of 700 individuals data from 7 divisions of Rajasthan.

Through this research work it is very clear that health expenditure and economic development has a positive relation therefore government and individuals must improve expenses on health and health related activities.

#### Model Summary<sup>d</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig.F Change
1	.982 <sup>a</sup>	.964	.964	4642.7706	.964	18665.993	1	698	.000
2	.990 <sup>b</sup>	.980	.980	3442.9816	.016	572.230	1	697	.000
3	.994 <sup>c</sup>	.988	.988	2682.4657	.008	452.243	1	696	.000

a. Predictors: (Constant), SAVING  
b. Predictors: (Constant), SAVING, costtreat  
c. Predictors: (Constant), SAVING, costtreat, FoodExpPM  
d. Dependent Variable: incomemonthlyfamily

ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	402351438096.628	1	402351438096.628	18665.993	.000b
Residual	15045612506.416	698	21555318.777		
Total	417397050603.045	699			
2 Regression	409134727460.304	2	204567363730.152	17257.066	.000c
Residual	8262323142.741	697	11854122.156		
Total	417397050603.045	699			
3 Regression	412388897671.580	3	137462965890.527	19103.695	.000d
Residual	5008152931.464	696	7195622.028		
Total	417397050603.045	699			

a. Dependent Variable: incomemonthlyfamily

b. Predictors: (Constant), SAVING

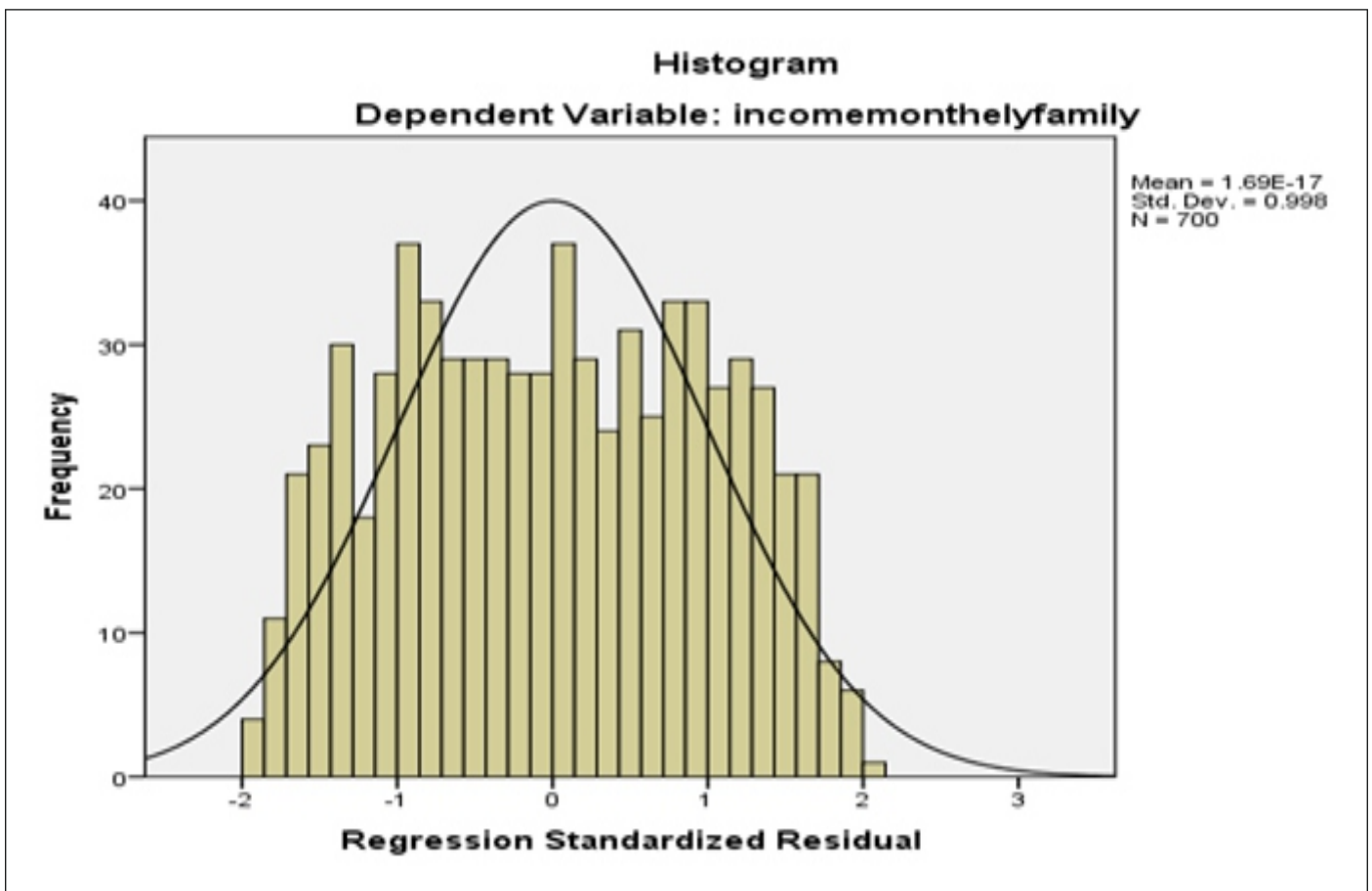
c. Predictors: (Constant), SAVING, costtreat

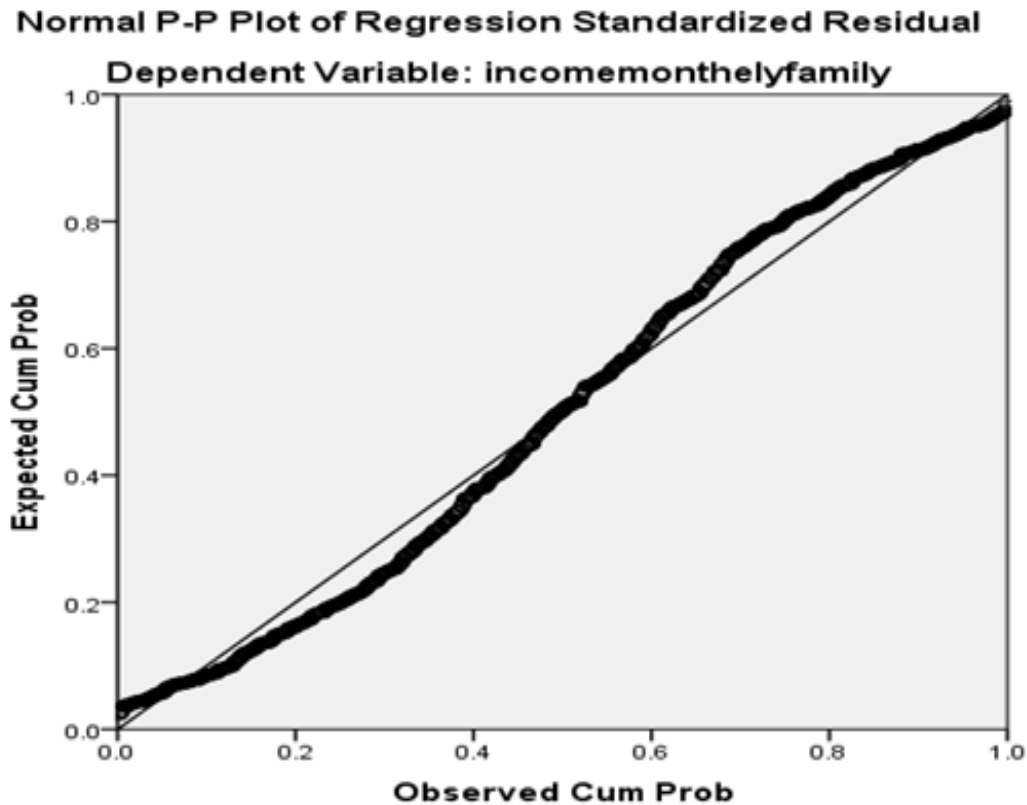
d. Predictors: (Constant), SAVING, costtreat, FoodExpPM

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	17148.706	263.446			65.094	.000
SAVING	.963	.007	.982		136.624	.000
(Constant)	10952.300	324.447			33.757	.000
SAVING	.980	.005	1.000		185.766	.000
Costtreat	.990	.041	.129		23.921	.000
(Constant)	4918.008	380.018			12.942	.000
SAVING	.978	.004	.998		237.827	.000
Costtreat	1.023	.032	.133		31.701	.000
FoodExpPM	1.055	.050	.088		21.266	.000

a. Dependent Variable: incomemonthlyfamily



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